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Behavioral Indicators of Legal and Illegal Gun Carrying

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14. ABSTRACT Law enforcement personnel use a variety of behavioral indicators to identify persons carrying legal and illegal firearms. This report specifically focuses on behavioral indicators of persons carrying either a revolver or a semi-automatic pistol. There are two general types of behavioral indicators of gun carrying. First, those related to the mass and size of the weapon and how it is carried. Second, those related to the situational and environmental awareness of the individual carrying a firearm and their reaction to perceived threats. In total, we have identified six behaviors associated with weight and carrying, and eleven behaviors associated with situational awareness and reaction to threats. The frequency and intensity of these behaviors are moderated by the way the gun is carried and the presence of a perceived threat. Further research is needed to identify the reliability and validity of the findings documented in this report.					
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PREFACE

Today's military commander recognizes the value of personnel in theater with experience in law enforcement gained from constant interaction with individuals who deceive, defraud, intimidate, and coerce. These personnel build an expertise in discerning the methods used to hide contraband in plain sight and witness the changing tactics, techniques, and procedures used by criminals. This is a lifesaving skill set and once documented, standardized, and validated, can be transitioned to others. Although not a common term in the accepted warfighting lexicon, the idea of discerning "What Just Doesn't Look Right" (JDLR) is an essential survival skill. Operationalizing JDLR, especially within and across cultures, can augment the curriculum being taught to military and law enforcement personnel by documenting and then transferring the essential knowledge employed by those pursuing criminals or insurgents.

A multi-phase project ongoing since 2010, the purpose of the JDLR Project is to identify and articulate indicators of behavior associated with deceit, threat, fear of detection, or the carrying of some form of contraband. Under JDLR, we are documenting these indicators of suspicious behavior based on the extent that a specific person of interest (like someone carrying a firearm) is aware of and interacting with a perceived threat (such as the presence of law enforcement).

The JDLR project has enabled us to identify specific behaviors law enforcement personnel look for, how these behaviors are used in their decision making process, and when these behaviors are perceived to be relevant. This research was derived from the knowledge and experience of police officers employed throughout the United States.

The project team includes law enforcement personnel with extensive experience with the subject matter at both the policy and operational level. Our team identified a number of behavioral indicators on which police officers routinely rely to interpret behavior and established standardized terminology for these behaviors. We also documented how and why police officers make decisions during an interdiction and the types of observations, assessments, and predictions they routinely make. This project facilitates both the transfer of knowledge to inexperienced personnel and serves as an impetus for expanding research to assess the reliability and validity of behavioral indicators of deceit, threat, fear of detection, and the carrying of contraband.

Each phase of the project is described independently below.

JDLR PHASE I

The primary goal of Phase I was the identification of behavioral indicators of deceit, threats, fear of detection, or the carrying of some form of contraband. Available research and documentation on these behavioral indicators is limited. It either focuses on simply articulating specific behaviors or describing various aspects of body language. In Phase I, we focused our efforts on documenting the behaviors indicating that a subject is carrying a handgun or illegal narcotics. We focused our operationalization of suspicious behavior on how an individual carrying these specific items of contraband behave when they are unobserved by a law enforcement (operating in their natural environment), how they behave when law enforcement or a police patrol is present but not watching them, how they behave when that patrol is watching them, and how they behave when initially approached by that patrol.

The findings of Phase I was documented in three reports. These reports include:

- 1) Behavioral Indicators of Illegal and Legal Gun Carrying;
- 2) Behavioral Indicators of Drug Carrying in Open Spaces; and
- 3) Behavioral Indicators of Drug Couriers in Airports.

These reports provide a foundation for our understanding of specific behaviors associated with threat, deceit, fear of detection, and the carrying of contraband.

JDLR PHASE II

The primary goal of Phase II was to identify how behavioral indicators are used during the course of the interplay between a person of interest and the police. The project ventured to understand how police interpret, process, and react to human behavior. Unlike in Phase I, we did not focus solely on persons carrying firearms or drugs because there are jurisdiction-specific legal and use-of-force elements which dictate the dynamics of those encounters. Instead, we concentrated on encounters where the exact motivator of the suspicious behavior was unknown. Focusing on the unknown was necessary because a person may be acting suspiciously for a variety of reasons: they may be in possession of a firearm or illegal drugs, engaged in a criminal act, be wanted by police, have negative attitudes towards law enforcement, or simply be anxious. It is up to the police to make this determination.

To better understand how police use behavioral indicators we conducted a Field Training Officer Interdiction Seminar in October 2013. We invited teams of police officers from throughout the country. The officers participated in a role-playing scenario with experienced police trainers and were subsequently debriefed regarding what they saw and how they made decisions. We learned how the participating officers interpreted the behaviors being exhibited in order to determine their course of action. This effort included the development of a Universal Interdiction Framework (UIF) to both teach and assess the usage of behavioral indicators during an encounter

In Phase II, we also studied how law enforcement personnel develop a baseline of normal behavior in a given environment. The baseline is used to identify behavioral deviations. To understand baselining and ensure the applicability of project research to military personnel operating in a wide variety of environments we conducted a Cultural Translation Seminar in March, 2014. The combined research in both baselining and cultural translation of behaviors indicated the tremendous variation in norms of behavior from one location to another. Based on these findings, we determined there was a need to develop a system or process which operational personnel can utilize to determine the baseline in a variety of contexts and cultural settings.

The findings of Phase II were documented in two reports. These reports include:

1. Behavioral Indicators During a Police Interdiction; and
2. Developing a Culturally Neutral Context Specific Baselining Process.

These reports, in combination with the research conducted in JDLR Phase I, provide a basis for understanding when, why, and how behavioral indicators are used to identify threats, deceit, people carrying contraband, or individuals trying to avoid detection. This research, although preliminary, is tied to police officers decisions to detain, search, use force, or make an arrest. The JDLR Project created a foundation to develop training for law enforcement and security personnel to utilize behavioral indicators in a safe, legal, and effective manner. Training police and security personnel to interpret and properly react to the behavior of those with whom they are interacting will better prepare them to complete their mission and keep themselves and their compatriots safe.

EXECUTIVE SUMMARY

Understanding behavioral indicators of persons carrying legal and illegal firearms is an important tool for law enforcement. It is relevant to both officer safety and crime reduction. With the proper training and an understanding of the operational environment, law enforcement personnel can use these behavioral indicators singly or in concert to identify people carrying weapons. The purpose of this report is to identify and describe these behavioral indicators, with a future goal of both validating and evaluating their utility for law enforcement and determining the extent to which these indicators can be useful in other areas involving deception and fear of detection.

This report focuses on behavioral indicators of persons carrying a revolver or a semiautomatic pistol. There are two general types of behavioral indicators of gun carrying: those related to the mass of a weapon and how it is carried, and those related to the situational and environmental awareness of an individual carrying a firearm and that person's reaction to perceived threats. We have identified six behaviors associated with the weight and mass and eleven behaviors associated with situational awareness and reaction to threats.

We explore behavioral cues associated with gun carrying as a confluence of two variables. The first variable is how the gun is carried and the second is the extent to which the individual believes he or she is under surveillance or is interacting with law enforcement. As such, we have developed six taxonomies of gun carrying that describe when specific behaviors are likely to occur during the different stages of an encounter with law enforcement.

These indicators were collected from a review of available literature, attendance at police training sessions, discussions and input from subject matter experts, and the experience of the authors. These indicators have not been subject to any systematic validation. A validation is necessary to determine the extent to which persons carrying firearms exhibit these behaviors and the ability of law enforcement personnel to spot them.

We hope to develop more efficient and effective means of assisting the police to identify and safely interdict persons carrying illegal firearms. This enhanced capacity could potentially serve as a means of reducing crime while keeping law enforcement officers safe. These behaviors are also relevant to other efforts to identify persons who are being deceptive or fear detection by law enforcement, the military, or other homeland security personnel.

BEHAVIORAL INDICATORS OF LEGAL AND ILLEGAL GUN CARRYING

INTRODUCTION

Understanding behavioral indicators of persons carrying legal and illegal firearms is an important tool for law enforcement. It is relevant to both officer safety and crime reduction. With the proper training and an understanding of the operational environment, law enforcement personnel can use these behavioral indicators singly or in concert to identify people carrying weapons. Officers interact with citizens on a routine basis, but not all citizens are a threat. The capacity to identify persons who may be a threat based on behavioral cues will allow officers to more appropriately react to threats, protect themselves, and provide a higher level of service to the public. Police officers must also legally articulate their rationale for stopping an individual whom they believe may be carrying a gun. The ability to articulate these behaviors from a legal standpoint will facilitate the adjudication and punishment of persons carrying illegal weapons.

A number of elements contribute to behaviors displayed by people carrying legal and illegal firearms. First, guns are potentially deadly objects that can harm the person carrying them if not handled appropriately. People carrying firearms are therefore expected to handle them with more caution and care than other objects they are carrying (New York State Division of Criminal Justice Services (DCJS), 2011; Pinizzotto et al., 2006). Second, guns have weight, and this will affect a carrier's behavior. Third, most people (88%) are right handed, which affects where a person places a gun and how he or she orients the body to use it (Porter, 2010). Finally, there are factors related to carrying firearms illegally that can influence behavior. For example, persons carrying illegal guns do not generally use holsters (Pinizzotto et al., 2006), which will affect behavior. If someone carrying an illegal gun is stopped and questioned by the police, the person is likely to be more nervous, and this fear is also likely to cause a number of identifiable behaviors (Pinizzotto et al., 2006). Understanding these behaviors in total, and training law enforcement personnel to understand and identify them, is therefore essential.

There are two general types of firearms, long arms (i.e., rifles, shot guns, and military style semiautomatic and automatic firearms) and handguns. Within these two types there is significant variation in weight and size. For the purposes of this study, we are focusing on the two main categories of handguns: the revolver and the semiautomatic pistol. A survey of federal and state inmates found that 8 in 10 offenders who carried a gun in the commission of a crime used a handgun (Harlow, 2001). Available research from the Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) found that the 77% of guns used in a crime and subsequently traced were handguns (Department of the Treasury, 2000, p. 10). Handguns are chosen because they are smaller and more concealable than other types of firearms.

The purpose of this report is to identify and describe behavioral indicators of gun carrying, with the future goal of both validating and evaluating the utility of these indicators for law enforcement. A number of the behaviors identified in this report are potentially applicable to other types of behaviors in other types of environments. Therefore, this study seeks to provide context to not only identify the behaviors but also identify why these behaviors occur, in order to allow for their transferability to other settings.

These indicators are derived from a review of available literature, attendance at police training sessions, interviews/discussions with subject matter experts (SMEs). The documentation of the findings included in this report was iterative and involved repeated review by different SMEs over a period of months. This work is part of a larger effort to study behavioral indicators of deceit, threat, fear of detection, and the carrying of contraband. This report is speculative and descriptive in nature and seeks to describe these behaviors to facilitate a systematic validation.

Using behavioral indicators to identify a person who is carrying a firearm is not necessarily a straightforward process. It requires an understanding of a person's behavior and his environment. Any single behavior is not necessarily indicative of gun carrying; rather, these indicators should be used in combination to understand an individual's behavior and provide context or opportunity to interact with an individual.

This report is divided into four main sections. The first section describes behavioral indicators of gun carrying. The second section describes behavioral cues associated with situational awareness and the reactions of people to threatening situations. The third section presents taxonomies describing when the various behavioral indicators are likely to occur. The fourth section describes alternative or novel ways of carrying a firearm and the behaviors that may be associated with these types of carrying.

BEHAVIORAL INDICATORS

Behavioral indicators refer to actions an individual performs, not the outward appearance of the individual (demographics, choice of clothing, etc.). These behaviors may occur consciously or subconsciously due to the context of carrying a firearm, the weight of the firearm, and how the firearm is carried. Based on physical and behavioral constraints, persons carrying firearms are expected to exhibit a number of behavioral cues. These indicators are listed in Table 1 and described in greater detail below. It must be noted that there are a wide variety of handguns, in a wide variety of sizes and shapes, made of a wide variety of materials, and this variation is likely to have a subtle influence on some behaviors; however, it is beyond the scope of this report to account for this variation.

Table 1 - Behavioral Indicators of Gun Carrying

Behavioral Indicators
Security Feel
Shortened Stride
Shortened Arm Swing
Adjusting Pants/Belt
Repositioning Gun
Blading

The identification of these behaviors by an individual in a public place is not straightforward. It requires an understanding of both the environmental and individual baselines. The individual and environmental baselines can be established through observation.

Two ways of understanding the behavioral baseline of an individual are establishing an individual's strong side (left hand dominant or right hand dominant) and the whole person approach (K. Porter, personal communication, March 3, 2012). Most people utilize their strong side when making some form of action that requires coordination or strength. For example, a person is likely to carry a firearm on his strong side to facilitate access and use. Establishing a person's strong side through observation facilitates the identification of these behavioral cues and it allows the identification of where a gun may be carried. Different ways of establishing a person's strong side include identifying where a person wears jewelry, which is often worn more on the weak side, and identifying the writing hand, which is often the strong side. Establishing a person's strong side is also associated with what is known as the "whole person" approach, in which an observer looks at the movements of a person on both sides of that person's body,

and uses one side of the body as a means to understand deviations from the norm on the other side of the body. For example, if 80% of people are right handed, they are likely to carry the weapon on the right side of the body. The left side of a person's body can be used as a baseline to understand behavior. For example, through this "whole person" approach, it is possible to understand when a person is exhibiting a disrupted stride due to a firearm because the disruption is on one, not both, sides of the body (K. Porter, personal communication, March 3, 2012).

Security Feel

The security feel is associated with people carrying items they believe have value and are concerned about losing. The individual will repeatedly touch the item of value (for example, a firearm) (Fig. 1) to confirm he still retains possession (DCJS, 2011; Porter, 2010;). Figure 1 illustrates a male in possession of a handgun located in his right coat pocket with his right hand touching the gun. This can be either a subconscious or a conscious behavior. Security feel can involve touching the gun with the hand, or with the elbow or another part of the body, depending upon where the gun is located. When a person is performing a security feel with the hand, one can see the person's finger tips lightly tapping the area or the palm of the hand gently touching or patting the concealed weapon (D.K. Hensley, personal communication, October 2, 2012). The Security feel is common among law enforcement officers carrying weapons while on and off duty, due to concern about losing the weapon (falling out of the holster) and the fear of not having it if it is needed. Another purpose of the security feel is to make sure that the firearm is concealed by clothing, or in some other manner, when standing or walking.

Trained law enforcement officers can look for the security feel. Most illegal firearms are carried unholstered and a significant percentage of these are in the front right of a person's waistline, tucked into a belt (Porter, 2010). Legal guns are also generally carried at the waist. A second common place to be carrying an illegal gun is in the small of the back at the waistline. The security feel may apply not only to firearms but also to other high value items hidden on someone's person, such as money, jewelry, cameras, illegal drugs, or edged weapons (i.e., knives, straight razors, box cutters). This behavior is not limited to a particular location on a person's body, but depends upon where the item of value is hidden.

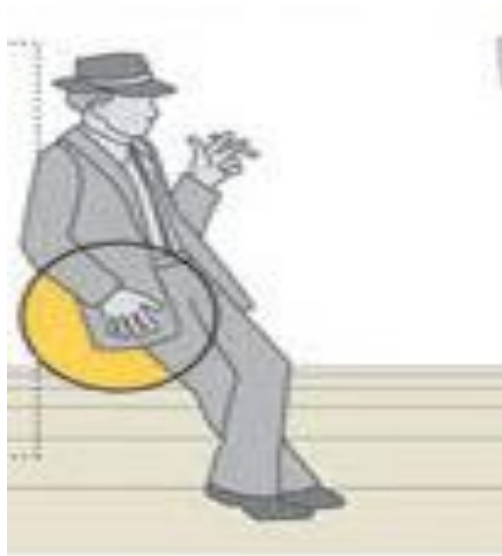


Fig. 1 — Security feel (source: DCJS, 2011.)

Shortened or Disrupted Stride

As noted above, most people are right handed, resulting in them carrying a gun in a holster on their waist or, in the case of an illegal gun, in a right pocket or in the waistband on the right side of the body (Porter, 2010). When a gun is tucked into a pant's pocket or the front waistband, it may hinder leg movements on that side of the body or cause the offender to have the right stride shorter than the left (DCJS, 2011; Porter, 2010). Instead of having a shortened stride, a person carrying an illegal gun may have a disrupted stride, meaning that the gait will be off in some recognizable way. This behavior may be caused by the individual attempting to either conceal the weapon or limit its movement so as not to drop it. The disrupted stride involves not only forward movement, but may also involve a side to side motion which could be described as a "waddle" (IALEFI, 2012). The disrupted stride may also be visible as a brief interruption or change in the rhythm of a person's stride over a longer distance (IALEFI, 2012). This change in the pattern of the walk would be to readjust the weapon.¹

The biggest contributing factor to a disrupted stride is the manner in which a person carries the concealed firearm. The manner of carrying is dictated by access to the weapon and concealment. The tighter a gun is secured to the body, the less likely it is to affect the stride. If it is carried loosely under the clothing, it can move around and become noticeable or fall out of the desired position; hence the carrier compensates for it with a restricted motion. The more experience a person has carrying a firearm, the less likely the stride will be affected.

Shortened Arm Swing

When a person is walking, his left and right arms normally swing in a consistent and symmetrical manner. When a person is carrying a gun in or out of a holster at the waist, the person may hold his arm or elbow against the weapon to control it and to keep it from falling out of the waistband (New York State Division of Criminal Justice Services, 2011; Porter, 2010;). This behavior has been described as a "dormant" or "dead" arm (K. Porter, personal communication, March 3, 2012). This shortened arm swing is likely to be more visible when a person is running. Observers may also see a person holding one hand directly over the firearm, in a pocket (IALEFI, 2012), or holding it tightly against the body when running.

Another good indicator of a shortened arm swing is the amount of daylight visible between the person's arm and his body when viewed from the front or back. Walking with a natural arm swing will generally create a small distance between the arm and the body, permitting a noticeable sliver of light between them. Comparing the light visible on both sides of the body can help clarify an intentional act to conceal, when one arm remains in contact with the body (D.K. Hensley, personal communication, October 2, 2012).

The exact nature of this behavior may vary depending upon the location of the weapon. The shortened arm swing is depicted in Fig. 2 which portrays a person running with a handgun located at the right hip area and his right forearm tight against the hip. The arm on the left is swinging normally while the arm on the right is not.

¹ A participant at a panel discussion on this topic indicated that a person carrying a gun may lead with his strong side (where the weapon is carried) to minimize disruption of his stride and maintain control of the weapon. This assertion is largely unverified, but this behavior is footnoted here to elicit possible feedback from readers and for further exploration of this type of behavior.



Fig. 2 — Shortened arm swing (source: DCJS, 2011)

Adjusting Pants

Most legal and illegal firearms are carried on the waistline, with legally carried firearms in a holster and illegal ones tucked into the belt. Since firearms have weight, when a person sits, stands up, or gets out of a car, and has a gun on his belt, he will often “adjust” the belt and the gun on it to account for any shift (New York State Division of Criminal Justice Services, 2011). This adjustment can also take the form of a person sliding the hands from the lower hip to the belt and pulling up the belt (much like an exaggerated “hitching” of a person’s belt). This behavior is especially visible when a person is moving from a sitting to a standing position, when the offender may hold the weapon against his body as he stands up. This can be a subconscious behavior. Where a person holds is dependent upon the location of the weapon. Offenders who are carrying a gun tucked into the belt may also consciously or subconsciously tighten the belt over a concern about losing the weapon (R. Martinez, personal communication, February 24, 2012).

Repositioning of Gun

Handguns are not all made the same; they do not have the same shape, nor are they made out of the same materials. These variables affect the weight distribution of the gun, which can in turn affect a person’s behavior. An unholstered handgun that is carried loosely will have a tendency to shift into a position with the heaviest portion facing down due to gravity. However, there is no single explanation of how each gun will position itself when carried loosely. Shifting may occur depending on how a handgun is balanced and the construction materials of the weapon² (Fig. 3).

² Some semiautomatics are constructed with an all steel upper receiver and a polymer lower receiver; the polymer is 80% lighter than the steel. Even with a loaded magazine, in handguns with a polymer lower receiver, the majority of the weight is in the upper receiver, causing this weight to rotate the barrel down and the handle up. On the other hand, if the lower receiver is constructed of steel and accompanied with a loaded magazine, the balance of weight may instead shift to the lower receiver as illustrated in Fig. 3.

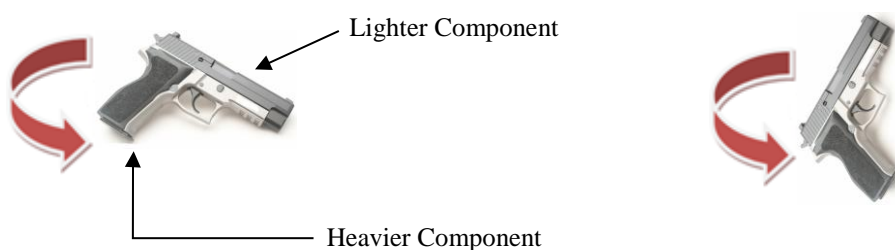


Fig. 3 — Example of firearm weight distribution and shifting

Three factors may enhance or reduce the likelihood of a firearm shifting. First, a handgun may be carried loosely inside the pants and underwear just above the groin area or supported by folding the bottom of a shirt back up toward the beltline, thereby creating a pocket. Second, the offender may allow the handle of the gun to rest on the belt or pant line for support, preventing it from sliding down. Third, the offender may be carrying a handgun loosely in a pocket. Since shifting of the firearm will make it more difficult for a person to draw the weapon, an offender is likely to reposition the gun to ensure access. An offender may be seen performing a circular or lifting movement with the hand, palm of the hand, or forearm outside of the clothing to adjust the gun's position. This movement is depicted in Fig. 4. Whenever a firearm is carried loosely, it will inevitably move around, requiring some type of adjustment.

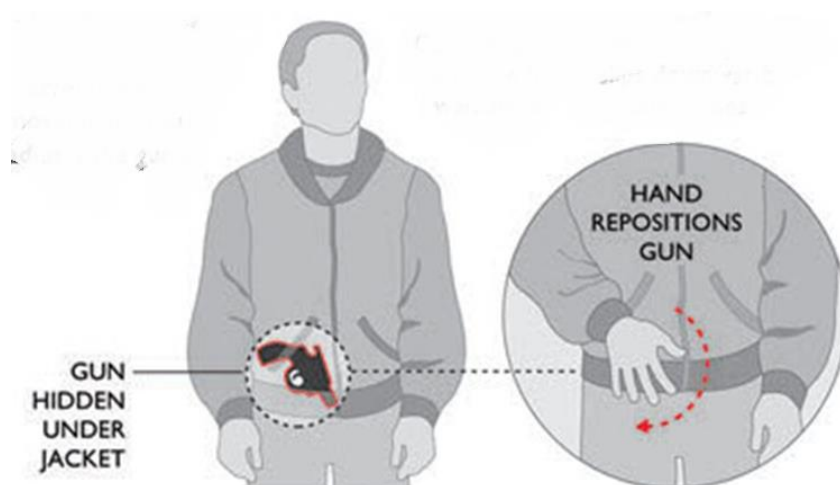


Fig. 4 — Repositioning of firearm (source: DCJS, 2011)

Repositioning may involve a number of other related behaviors. If an individual is carrying a firearm loosely in the pocket, a person may reach directly into the pocket to reposition the firearm. A suspect may also push up on the muzzle of the firearm with one or two fingers. This is often seen with people carrying the gun in a holster, but may also occur when the weapon is unholstered (IALEFI, 2012). The gun may also be repositioned when the person carrying it in the presence of law enforcement or is concerned or aware of threats in his vicinity and is attentive to the actions and focus of the officers, or is otherwise feeling threatened or stressed. The gun may be repositioned with the palm of the hand or the forearm prior to drawing the gun with the intention of using it, because dopamine is released when the body starts

reacting to a threat, and this can reduce sensitivity in the fingers (D.K. Hensley, personal communication, October 2, 2012).

Blading

Persons carrying legal or illegal weapons often conduct a behavior known as blading. Blading can be separated into two objectives: to shield or conceal the gun from visual detection and to facilitate drawing the weapon. Whether to conceal or to facilitate access, it is done by both trained and untrained individuals. To conceal a weapon, a person carrying a gun is likely to turn 90 degrees away from the person observing or approaching, placing his body between the gun and the other person. It is a clear action to avoid detection. Since a handgun is most likely carried in a location and in a manner that makes the gun quickly accessible it becomes more difficult to conceal it in the presence of law enforcement because of their ability to recognize behavioral indicators of people carrying firearms. People often carry a firearm in the area of the hips or pants or coat pockets and will position the weapon on the dominant side or strong side of the body. Whether blading for the purpose of concealment or preparation to draw the handgun the dominant side will normally be the side furthest from an adversary or observer. Blading can be a nervous reaction to the presence of law enforcement. Blading for concealment is depicted in Fig. 5 which portrays a person carrying a handgun on his right hip and is approached by someone from whom that they want to better conceal the gun. He will turn his body to the right and walk on the left side of the oncoming person blocking the view of his hip where the gun is located.

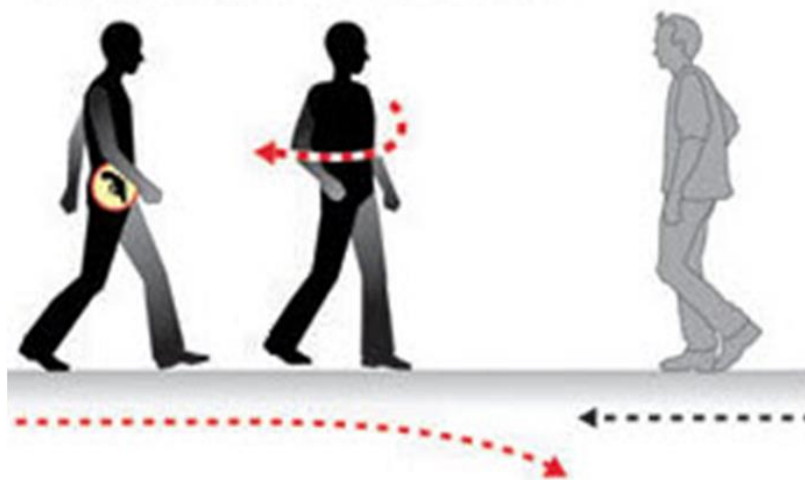


Fig. 5 — Blading (source: DCJS, 2011)

In the case of the second objective, when blading is done for the purpose of drawing and using a firearm, an individual may face his adversary and orient his stance so the strong or dominant side is positioned about one half step back from the weak side of the body. The stance is similar to a fighting stance. It can appear both when someone is aggressively moving to attack, and when an individual is trying to conceal a gun, other weapon (such as a knife or blunt weapon), drugs, or other item of value to them.

The six behavioral indicators identified in this section may occur when an individual carries a firearm. The indicators are based on the weight and size of the weapon and how it is carried. Trained law enforcement, with a solid understanding of the operating environment, may be able to identify these carriers and more safely interdict them.

SITUATIONAL AWARENESS AND REACTIONS TO THREATS

People carry a firearm for many different reasons. Some people carry because they believe they are in some form of danger. Others may be carrying because they have intent to use the weapon to inflict harm. Any person carrying a firearm, legally or illegally, does so for the purpose of protecting himself from a known threat or the possibility of a threat. Individuals illegally possessing firearms are likely to believe their environments to be more hostile; two major perceived threats are other criminals and law enforcement. Based on this belief, they will exhibit a greater enhanced awareness when compared to a person who carries legally.

When a person perceives or encounters a threat, that person will react based upon the level of threat perceived. This combination of situational awareness and reaction to threats results in a number of associated behavioral cues that are potential indicators of gun carrying. The perception of threats by an individual and the way an individual reacts to those threats are subjective and the manifestation of behavioral cues will vary from individual to individual.

Initially, it is important to understand the concept of situational awareness. Situational awareness is the extent to which an individual is aware of, evaluates, and reacts to his environment. An essential element of situational awareness is an understanding of the environmental baseline of the place where a potential offender or law enforcement officer is operating. The behavioral indicators associated with situational awareness involve a deviation from the norm of the environment. The application of situational awareness to self-defense training practices for law enforcement, the military, and civilians was created by retired Army Colonel Jeff Cooper (Spencer, 2013). Cooper created the color codes of situational awareness, which describe levels of situational awareness in terms of assessing and reacting to threats. These codes are widely used throughout law enforcement.

The most distinguishing aspect of situational awareness is the individual's observable act of attentiveness and focus on other people in the environment. This awareness involves the continuous movement of a person's eyes and head as he is scanning for a perceived threat or assessing the potential threat from another individual. The head may appear to be on a swivel looking from side to side and even over the shoulder. Although these characteristics range from subtle to obsessive, the person will inevitably show signs of anxiety, suspicion, and caution about others.

The combination of a person's understanding of his environment, his reaction to potential threats, and his level of confidence in protecting himself will result in a number of behavioral indicators that may be relevant for identifying persons carrying guns. These indicators are listed in Table 2 and more fully explained below.

Table 2 — Behavioral Indicators of Situational Awareness and Reaction to Threats

Behavioral Indicators
Scanning
Threat Assessment
Adrenaline Shake
Involuntary Facial Cues
Dissipatory Actions
Arms in Semi-Defensive Position
Target Glance
Evasive Maneuvers/Avoidance
Adversarial Distance
Adjustment of Clothing
Dissociation

Scanning

Scanning describes the behavior of a person constantly looking around and making visual contact of every individual approaching or inside his immediate area. This appears as an individual visually searching the environment for any sign of danger (R. Martinez, personal communication, February 24, 2012). or in a state of hypervigilance (K. Porter, personal communication, March 3, 2012). It can include focused attention to evaluate the object of a person's presence.

Threat Assessment/Awareness of Environment

Threat assessment involves evaluating an adversary's threat potential through direct focus and study of the individual. It is often preceded by scanning. It involves not only an assessment of the individual, but also an assessment of the environment for avenues of escape or a position of advantage. A person assessing a threat is deliberate and calculating in his attention to detail and may be developing a contingency plan if a threat occurs. This may include staring at a person walking through a crowd and looking at each person close to them in a prolonged manner. This action may be done in preparation for a violent encounter even without the presence of danger. In an encounter with law enforcement, this behavior may be seen as an offender "eyeing an officer up" as the officer approaches (K. Porter, personal communication, March 3, 2012). Often this behavior is seen in people who are well trained or extremely cautious.

Adrenaline Shake

The adrenaline shake is a physiological reaction of the body in response to stress that increases heart rate and blood pressure. The secretion of this stress hormone, also known as epinephrine, is part of the human "*fight or flight*" response to fear or aggression. It can be a precursor to a violent act. It can be felt as small tremors if in contact with an individual. This shaking is not generally visible but may be apparent at short distances. Also, it is not necessarily motivated by fear; rather, in moments of stress, adrenaline is "dumped" into the body, and the shaking is a reaction to the increased adrenaline levels, not to the threat.

Involuntary Facial Cues

Involuntary facial cues are a physiological reaction of the body due to stress. These facial cues include sweating, a red face, bulging veins, blinking (IALEFI, 2012), licking of the lips (R. Martinez, personal communication, February 24, 2012), and fast eye movement. In some individuals, this might involve a distant unresponsive stare, often called a “deer in the headlights” look. High blood pressure and a neurological condition known as tachypsychia are the causes of these visible reactions and are stimulated by fear and anger.³

Dissipatory Actions

People may have a number of involuntary reactions to a rapid increase in the level of adrenaline in the body when put in a fight or flight situation (also known as the “adrenaline dump”). The body produces a chemical called epinephrine that is used to protect and assist the body in a traumatic and violent encounter. Because physical activity can help control and burn off epinephrine and adrenaline, a person may behave in a certain way to wear off these substances. This behavior could involve two general types of movements: movements of the full body or movement of a single body part. Porter (K. Porter, personal communication, March 3, 2012) describes these behaviors as dissipatory actions. Full body movements might include pacing back and forth or rocking. A person who is rocking is usually stationary and will slowly rock back and forth or from side to side (R. Martinez, personal communication, February 24, 2012). Rocking can also sometimes be interpreted as an indicator of an impending violent act. Partial body dissipatory actions might involve repetitive behavior, such as running the hands through the hair, touching the face or facial hair, rubbing the head, itching, yawning, tapping the foot, or continuously rubbing the fingers together (IALEFI, 2012; G. Lee, personal communication, August 24, 2012).

Arms in a Semi-Defensive Position

When persons are preparing themselves to react to a perceived threat, they may hold their arms in a semi-defensive position. This is when an individual places his hands at waist level to shorten the reaction time to defend or strike; the body may also be slightly turned to allow for quicker reaction to threats. This may also be an ideal position from which to quickly draw a weapon. Whether or not an individual has closed fists is also important. A closed fist could indicate an increased likelihood of a person who feels threatened or intends to use physical force and is ready to react (R. Martinez, personal communication, February 24, 2012).

Target Glance

Prior to reaching for a weapon or striking someone in a specific area, a person will quickly look at that spot seconds or milliseconds before the act. It is done to orient the body to the action to be performed, or assess and evaluate the action to be performed. The motive behind the glance or the visual tracking of that specific item is in response to what a person fears or wants, desires or needs. It may be performed in conjunction with body movement toward the item to retrieve it. A good example to depict this is purse snatching: as the perpetrator begins his stalk of the intended victim, his eyes are fixated on the purse hanging on the woman’s arm while covertly closing the distance between himself and the victim carrying the purse.

³ Tachypsychia is a neurological condition that alters the perception of time, usually induced by physical exertion, drug use, or a traumatic event. For someone affected by tachypsychia, time perceived by the individual either lengthens, making events appear to slow down, or contracts, making objects appear to be moving in a speeding blur. It is believed to be induced by a combination of high levels of dopamine and norepinephrine (Haanstad, 2009).

In the case of an interaction with law enforcement, a suspect may look at a police officer's gun just before attempting to grab the weapon from the officer's holster, or may glance at the exact location of a hidden weapon on his person or immediate vicinity prior to reaching for it. The target glance focuses on something that the individual wants or needs, in the moment before he moves to get it.

Evasive Maneuvers/Avoidance

Evasive maneuvers and avoidance can be described as the deliberate movement of an individual away from a threat or potential threat. This behavior is primarily defensive in nature. It is noticeable in the presence or approach of law enforcement by the immediate change in behavior to a "retreat mode," with the person creating a greater distance between himself and a threat. When a person believes law enforcement is a threat that cannot be avoided, he may evade and limit the chance of being noticed and not attract attention. This may also include an individual walking away after a threat has passed (like a police car) with the thought that the car will eventually turn around.

Adversarial Distance

A person who is approached by or dealing with a perceived threat may move to a distance he feels confident in accurately shooting from or a position of advantage that may provide cover. While evasive maneuvers are defensive in nature, adversarial distance is offensive in nature. It may involve a person who does not move from a position of advantage or cover when ordered or pulsed by a threat (IALEFI, 2012). An individual may also attempt to conceal himself or get behind cover to protect himself from gun fire (R. Martinez, personal communication, February 24, 2012). The attacker will have a distinctive focus of attention on the intended victim. The attacker may not seem to be in tune with his immediate surroundings because he is "zoned in" on the attack. A person may place himself in this position when he believes the perceived threat cannot be avoided or overcome.

Adjustment of Clothing

The adjustment of clothing can be a deliberate action to conceal or retrieve a firearm. When a person is threatened and reacting to a threat, the individual may remove or lift a layer or layers of clothing to retrieve the gun quickly or unnoticed. The goal behind this movement is to allow clean access to the firearm (R. Martinez, personal communication, February 24, 2012). This could include unzipping, unbuttoning, reaching under or lifting up an article of clothing with one or both hands. The fewer the number of steps to draw the gun, the greater the advantage a person will have during an encounter. The extent to which this occurs is also partially dependent upon the level of a person's training.

When concealing a handgun located on the hip or inside a waistband, it is common practice to wear a shirt over the gun but not tucked into the belt or waist of the clothing. This allows easy access to the gun by simply reaching under the shirt or lifting up the shirt. Depending on the size of the gun and how it is secured, it will sometimes create a "print" or silhouette under the article of clothing, revealing its shape. To prevent this from happening, a person will pull down on the bottom of the shirt at the spot where the gun is, to eliminate the "print." This action reveals a noticeable difference in where the shirt hangs or lies against the body compared to the other side (D.K. Hensley, personal communication, October 2, 2012). A person may also adjust clothing to ensure the weapon is covered or concealed by the clothing. Often this behavior is called "picking," which is when someone grabs his shirt with two fingers and pulls it away from the weapon and the body (IALEFI, 2012).

Sometimes the way we use our hands to complete a common task becomes noticeable when performed in an odd fashion. The most common and easiest way for a person to adjust his pants and belt when they have shifted or dropped on the hips is to insert his thumbs between his body and clothing and

grab hold of the clothing with the rest of our hand. When a person is carrying a concealed handgun that is supported by the pants/belt, and the gun needs to be adjusted, the person may try to adjust it without wrapping his hand around the gun for fear of detection and instead place the palm of the hand firmly over the gun with fingers extended, and lift or drag it along with the pants to the desired position (G. Lee, personal communication, August 24, 2012).

When a handgun is carried loosely in a coat or pants pocket, it can create a “print” of the gun visible on the outside of the pocket. The distinctness of the shape revealed depends on how tight the pocket wraps around the gun. Most visible is the outside silhouette of the gun that is formed at the bottom of the pocket due to gravity. A gun carried in a pocket without any form of closure on the clothing to secure it runs the risk of falling out, depending on the activity. To compensate for this and the constant repositioning, the person may place one hand inside the pocket and on the gun over a continuous time period. This is most prevalent with coat pockets. If a gun is concealed inside a coat pocket, particularly one constructed of thin fabric, the weight of the gun pulling down on the jacket may create a crease or fold. This visible line runs vertically from the shoulder or chest area directly to the pocket, precisely over the gun. If there is nothing weighting down the other side of the jacket, it becomes more distinct in comparison.

Dissociation

Dissociation involves the reaction of someone to a threat. Rather than a person attempting to physically evade a threat, he may try to become “invisible” in place and may feign some kind of behavior so as not to be noticed and avoid eye contact with the threat (IALEFI, 2012). This behavior is similar to the way a child in school tries to avoid being called on by the teacher when he has not completed his homework or does not know the answer to a question. Dissociation could also involve a person looking at his phone, checking for something in the pockets, or any other behavior that would show he is acting normally and avoiding engagement with the threat (IALEFI, 2012). This behavior can be particularly noticeable when a person is scanning for threats when law enforcement is not around, then stops scanning and tries to be invisible when law enforcement is around, then goes back to scanning when law enforcement leaves. As another example, an individual may dissociate by total disregard of an obvious, undeniable presence of law enforcement.

These behavioral indicators relate to the extent that an individual is aware of the environment and reacting to a perceived threat. Using these indicators, it may be possible to facilitate the identification of not only persons carrying firearms, but also persons who perceive law enforcement as a threat for other reasons.

UNDERSTANDING BEHAVIORS DURING AN ENCOUNTER

Behaviors associated with gun carrying, especially illegal gun carrying, may be distinct during an encounter with law enforcement or other threat in the environment. People react differently based upon their perceived environment; changes in the environment may result in a change in behavior. People carry guns in different ways and this too influences the type of behavior they exhibit. Based on this premise, it is important to explore how a person’s behavior, when they are carrying a gun in different ways, may be affected by changes in the environment, and particularly by an encounter with law enforcement.

The material in this section is based on hypotheses developed primarily by the authors. Systematic evaluation of these assertions and hypotheses is necessary to determine the extent to which these behaviors occur in an operational environment. To our knowledge, these assertions have not been scientifically tested or validated.

To facilitate our understanding of these behaviors, we propose there are five basic stages of behaviors associated with gun carrying during an encounter between an illegal gun carrier (an offender) and a law enforcement officer (LEO) (Fig. 6). For the purposes of this discussion, the term offender is used for simplicity and consistency, but could represent any individual of interest. The first stage describes how an offender behaves when law enforcement is not present and he does not feel under any direct threat from law enforcement. The second stage focuses on how a person behaves when law enforcement is present, but when he does not believe law enforcement is observing him in particular. The third stage involves an offender who believes he is under “surveillance” by law enforcement personnel. The fourth stage involves how an individual will act when approached and engaged in the beginning stages of an interaction with law enforcement. The fifth stage refers to the interplay between the subject and person of interest after the initial contact to the conclusion of the interaction.

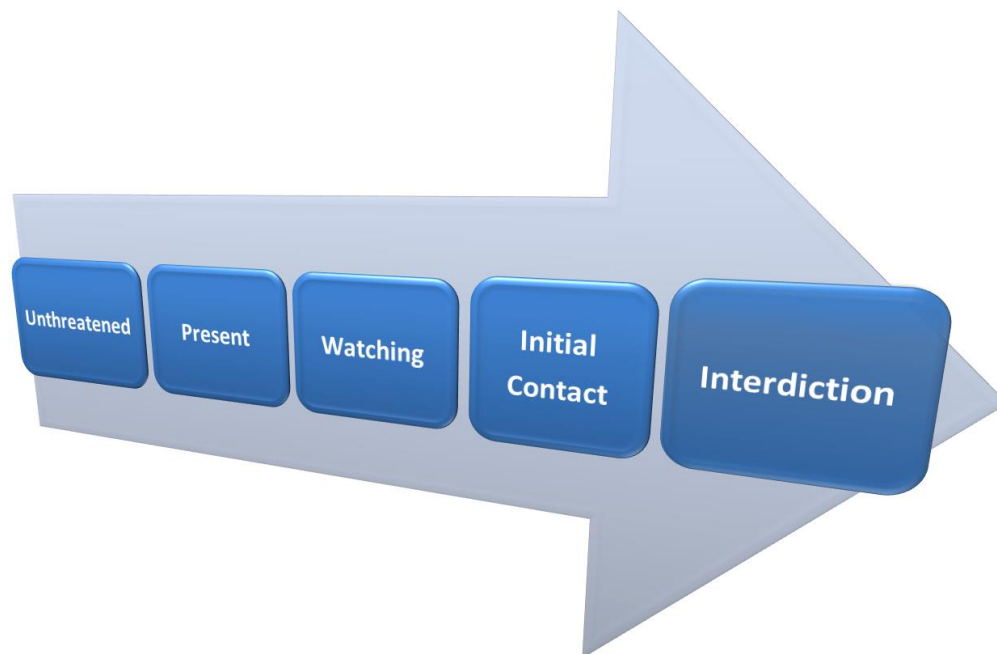


Fig. 6 — Behavioral stages associated with an encounter between an offender and an LEO

The five behavioral stages are more fully explained in Table 3.

Table 3- Behavioral Stages Associated with an Encounter

Stage	Description
Unthreatened	Unthreatened describes how a subject behaves when law enforcement is not present and they do not feel they are under any direct threat from law enforcement or any other person in their environment. They may be cautious along with being in a state of relaxed alertness.
Present	Present focuses on how a subject behaves when law enforcement is in the general area, but when they do not believe that these LEOs are observing them in particular. At this stage the subject would be in a state of threat awareness and attentive to the officer(s) actions and focus. The subject may start to prepare for or casually put into action a plan to avoid any potential interdiction with law enforcement if they should approach or become the object of attention.
Watching	Watching involves a subject who believes that they are under “surveillance” by law enforcement personnel. He may become more conscious of his own behavior which may further influence activity. They may also feel in danger and are now evaluating the threat along with checking for positions of advantage or avenues of escape (fight or flight) if law enforcement engages them.
Initial Contact	Initial Contact involves how an individual will act when a subject is approached and engaged in the beginning stages of an interdiction with law enforcement. They are now entering into a state of conflict with L.E. and may believe his criminal activity is the object of the interdiction or will eventually be exposed. Generally, the threat of arrest will quickly trigger a decisive course of action between threat avoidance and / or an aggressive attack. The initial contact has also been referred to as a “pulse”.
Interdiction	The Interdiction occurs after law enforcement has made initial contact and concludes when either a release or arrest has been made. It consists of a complex interaction between law enforcement and subject(s). This interaction includes verbal and nonverbal behaviors that are displayed by the subject(s). These behaviors are often influenced by the officers’ verbal engagement, actions and reactions to the situation or the behavior of the subjects.

Within this context, it is important to understand behavioral cues associated with gun carrying as a confluence of two variables. The first variable is how the gun is carried and the second is the extent to which the individual believes he is under surveillance or is interacting with law enforcement. To understand the convergences of these influences, six taxonomies relating to the combination of how a gun is carried and the behavioral stages of gun carrying are identified: (1) situational awareness and body position; (2) firearm carried with no holster; (3) firearm carried with holster at the waist; (4) firearm carried in jacket pocket; (5) firearm carried in pants pocket; and (6) firearm carried in ankle holster. These taxonomies only include behaviors that occur from Unthreatened to the Initial Contact. There are numerous other ways of carrying weapons, including different styles of holsters located in reachable areas other than the waist, but they are not included in this matrix; however, alternative and novel methods of gun carrying, and their influence on behaviors, are discussed in the following section.

An encounter between law enforcement and a person carrying a weapon is not linear; it may not simply progress from unthreatened unobserved, to present, watching, and then contact (M. Ranalli, personal communication, February 28, 2012), but may jump from one stage to another, in no particular order. For example, an offender carrying an illegal gun may be standing on a corner under a street light on a dark night. The offender believes he is unobserved by law enforcement. Suddenly, a uniformed officer on foot patrol walks into the light and says hello to the offender. That offender is moving directly from being unobserved to the initial contact or pulse stage. An interaction can progress or regress from one stage to another without following the sequence illustrated in the taxonomies. From a hidden point of surveillance, the changes in behavioral cues that jump from one stage to another can be more distinguishable. Also, these taxonomies are not necessarily representative of how an individual carrying an illegal firearm might behave in relation to a threat that does not come from law enforcement.

The behaviors an individual is likely to exhibit when carrying a firearm can be depicted in the form of a Venn diagram (Fig. 7). All carriers are likely to exhibit situational awareness behaviors and behaviors associated with their method of carrying.

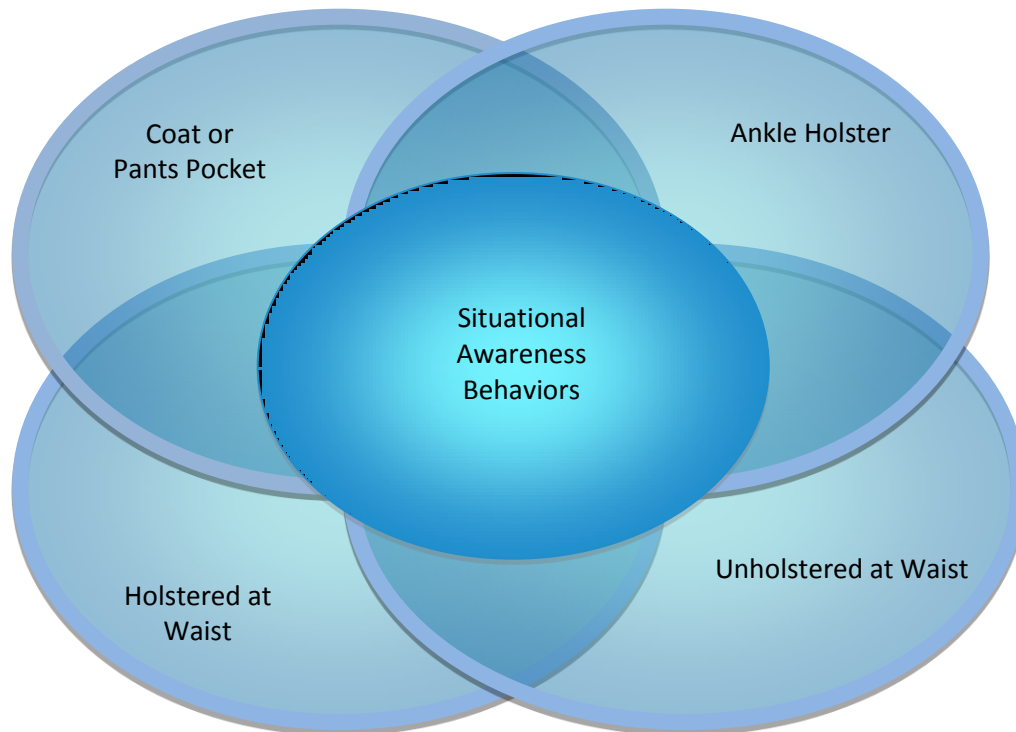


Fig. 7 — A carrier's behavior

As noted above, many of these behavioral indicators become apparent through an understanding of the environment and the normal behavior of individuals within that environment. These behavioral cues can be identified through the observation of groups, and of individuals within groups, or observations of an individual over time (R. Martinez, personal communication, February 24, 2012; K. Porter, personal communication, March 3, 2012; M. Ranalli, personal communication, February 28, 2012). For example, if all members of a group are acting in a certain way, it becomes apparent when one member of the group is acting differently. In the case of police officers who have worked in the same neighborhood for an

extended period of time, they may be familiar with the way specific individuals act. A variation from this norm would indicate a need for greater observation and an understanding of why an individual's behavior has changed (R. Martinez, personal communication, February 24, 2012).

Situational Awareness and Reacting to Threats

Persons carrying legal and illegal weapons are likely to pay more attention to their surroundings and the potential threats in their environment. They are also therefore likely to react differently based on who is in their environment and the extent to which they believe particular individuals in it are a threat. Behavioral cues associated with situational awareness and the stages of gun carrying are presented in Table 4.

Table 4- Situational Awareness and Reaction to Threats

Behavior	Stage			
	Unthreatened	Present	Watching	Initial Contact
Scanning	Yes	Yes	Yes	No
Threat Assessment	Yes	Yes	Yes	Yes
Adrenaline Shake	No	No	Maybe; threat dependent	Yes
Involuntary Facial Cues	No	No	Maybe; threat dependent	Yes
Dissipatory Actions	No	Maybe; threat dependent	Maybe; threat dependent	Maybe; threat dependent
Arms in Defensive Position	No	No	Maybe; proximity and threat dependent	Yes
Target Glance	No	No	No	Yes
Evasive Maneuvers/ Avoidance	No	Maybe; threat dependent	Yes	Yes
Adversarial Distance	No	Maybe; proximity, training, and threat dependent	Maybe; proximity, training, and threat dependent	Maybe; proximity, training, and threat dependent
Adjustment of Clothing	Maybe; for concealment	Maybe; proximity and threat dependent	Maybe; proximity and threat dependent	Yes
Dissociation	No	Maybe; proximity and threat dependent	Yes	Yes

Table Key

Color	Description
Green	Behavior likely to occur
Yellow	Behavior may occur
Red	Behavior not likely to occur

No Holster

There is a clear relationship between illegal gun carrying and carrying a firearm without a holster. Research on gun carrying behavior by criminals who killed law enforcement officers indicates that these offenders generally did not use holsters (Pinizzotto et al., 2006;). This same research found that of 37 total shooters, 48% carried the gun in the front belt/waist area, 20% carried it in the small of the back, 22% hid it in the groin area, and 11% carried it in a pocket (Pinizzotto et al., 2006). When these behaviors occur, they are done with the goal of avoiding detection or to allow easy access to the weapon. Table 5 describes behavioral cues associated with carrying an unholstered gun and when they are likely to occur.

Table 5 - Taxonomy for Unholstered Weapon

	Stage			
Behavior	Unthreatened	Present	Watching	Initial Contact
Security Feel	Yes	Yes	Yes, may cover with elbow only	No, seeks to avoid attention
Shortened or Disrupted Stride	Yes	Yes	Yes, but will limit movement	Yes, but will be limited unless fleeing
Shortened Arm Swing	Yes	Yes	Yes, but limited	Yes, but only in flight
Adjusting Pants	Yes	Yes	Yes, but only likely to occur when standing up to leave	No, seeks to avoid attention
Repositioning of Firearm	Yes	Yes	No, seeks to avoid attention	No, unless fleeing
Blading	No	Yes, to avoid detection	Yes	Yes

Table Key

Color	Description
Green	Behavior likely to occur
Yellow	Behavior may occur
Red	Behavior not likely to occur

Holstered

As indicated above, many individuals who carry weapons illegally do not use a holster. However, there are many who carry both legal and illegal weapons holstered, and it is important to address the extent to which these individuals are likely to exhibit specific behaviors. The behavioral cues of a person carrying a holstered weapon may be less noticeable than the cues exhibited by someone carrying at the waist unholstered. Also, it may be possible to see the weapon when it is being carried holstered. This taxonomy is presented in Table 6.

Table 6 - Taxonomy for Holstered Weapon

Behavior	Stage			
	Unthreatened	Present	Watching	Initial Contact
Security Feel	Maybe, might be done with arm instead of hand	Maybe, might be done with arm instead of hand	Maybe, might be done with arm instead of hand	Maybe, might be setting self to draw weapon
Shortened or Disrupted Stride	Maybe, but for concealment only	Maybe, but for concealment only	Maybe, but for concealment only	Maybe, but subtle and for concealment
Shortened Arm Swing	Maybe, but for concealment only	Maybe, but for concealment only	Maybe, but for concealment only	Maybe, but for concealment only
Adjusting Pants	Maybe, but will be subtle	Maybe, but will be subtle	Maybe, but will be subtle	No, seeks to avoid attention
Repositioning of Firearm	Maybe, but will be subtle	Maybe, but will be subtle	Maybe, but will be subtle	No, seeks to avoid attention
Blading	No	Yes	Yes	Yes

Table Key

Color	Description
Green	Behavior likely to occur
Yellow	Behavior may occur
Red	Behavior not likely to occur

Gun in Pocket

Some offenders decide to carry a smaller handgun in the pocket of either their pants or a jacket. When carried loosely in a pocket, there can be a “print” of the gun visible on the outside of the pocket. Depending on how tightly the pocket wraps around the gun, the shape visible may be distinct or indistinct. Most visible is the outside silhouette of the gun that is formed at the bottom of the pocket due to gravity. A gun carried in a pocket without any form of closure securing it is at risk of falling out, depending on the carrier’s activity. To compensate for this risk and the constant repositioning, the person may keep his hand inside the pocket on the gun. This is most prevalent with coats and “hoodie” sweatshirts that have front pockets. When a gun is concealed inside a jacket or coat pocket, particularly one constructed of thin fabric, the weight of the gun pulling down on the jacket may create a crease or fold. This visible line runs vertically from the shoulder or chest area directly to the pocket, precisely over the gun. If an offender places a handgun in his pants pocket, he is likely to exhibit the security feel, shortened or disrupted stride, shortened arm swing, adjustment of pants, repositioning of the firearm, and blading. If he carries in a coat pocket, he is likely to exhibit the security feel, shortened arm swing, repositioning of the firearm, and blading. A shortened or disrupted stride may not occur, but the firearm may cause the clothing to swing, bulge, hang lower on one side, or shift due to the weight of the weapon. Tables 7 and 8 present the behavior taxonomies associated with carrying the gun in the coat pocket and pants pocket, respectively

Table 7 - Taxonomy for Gun in Coat Pocket

Behavior	Stage			
	Unthreatened	Present	Watching	Initial Contact
Security Feel	Yes	Maybe	Maybe	No
Shortened or Disrupted Stride	Maybe	No	No	No
Shortened Arm Swing	Maybe	Yes	Yes	Yes
Hand in Pocket	Yes	Maybe	Maybe	Maybe
Repositioning of Firearm	Yes	Maybe	No	No
Blading	No	Maybe	Yes	Yes

Table Key

Color	Description
Green	Behavior likely to occur
Yellow	Behavior may occur
Red	Behavior not likely to occur

Table 8 - Taxonomy for Gun in Pants Pocket

Behavior	Stage			
	Unthreatened	Present	Watching	Initial Contact
Security Feel	Yes	Maybe	Maybe	No
Shortened or Disrupted Stride	Yes	Maybe	Maybe	Maybe
Adjusting Pants	Yes	Maybe	No	No
Hand in Pocket	Yes	Maybe	Maybe	No
Repositioning of Firearm	Yes	Maybe	No	No
Blading	No	Maybe	Yes	Yes

Table Key

Color	Description
Green	Behavior likely to occur
Yellow	Behavior may occur
Red	Behavior not likely to occur

Ankle Holster

Persons carrying a gun legally often use an ankle holster when it may not be feasible to wear a standard holster at the waist. Generally a small or compact handgun is carried on the ankle due to the difficulty of concealment and mobility. The mobility refers to the ability of the individual to move his body freely without clothing revealing the gun or losing control of the gun. If a gun is to be carried on the ankle, it must be firmly attached yet readily accessible. Often the ankle holster is worn on the inside of the opposite leg of the primary hand; because most people are right handed, ankle holsters are generally worn on the inside of the left leg. Wearing an ankle holster will likely limit some of the behavioral indicators associated with wearing the firearm at the waist. There are other ways offenders have been found to carry guns at their ankles without using a holster. In Las Vegas, it was found some people were putting small caliber pistols in high top sneakers (R. Martinez, personal communication, February 24, 2012). The same was found in upstate New York, but with Timberland boots. In another case, an individual wore one oversized shoe and stored a handgun inside the front of his shoe (K. Porter, personal communication, March 3, 2012). A makeshift holster can also be made using an Ace-type elastic bandage, by wrapping it tightly around the ankle and lower calf, securing the gun in an upright position with the handle exposed. If the gun is discarded, the bandage can pass as an ankle support (D.K. Hensley, personal communication, October 2, 2012).

A gun carried on the ankle might cause a person to have a disrupted stride. The extent of disruption is likely to depend on the weight and size of the firearm. The larger the firearm, the more a person's stride

is likely to be disrupted. The disruption will also be exacerbated when a person starts to run because the gun will shift, since it cannot be strapped to the ankle so tightly as to inhibit blood flow in the leg and to the foot. The faster a person runs, the more the gun will wiggle. Depending upon the type of clothes a person is wearing and the size of the gun, there is likely to be a bulge on the inside ankle where the gun is strapped. A good indicator of the presence of a gun on the ankle is the continuing existence of the bulge during activity. If the person extends his leg in a way that makes the pant leg creep upwards, it will generally cause the carrier to spontaneously readjust the pant leg for fear of exposing the gun. The taxonomy of cues associated with this carrying method is presented in Table 9.

Table 9 - Taxonomy for Weapon in Ankle Holster

Behavior	Stage			
	Unthreatened	Present	Watching	Initial Contact
Security Feel	Maybe, but not necessarily with hand	Maybe, but not necessarily with hand	No	No
Shortened or Disrupted Stride	Yes	Yes	Maybe, only if walking	Maybe, only if walking/fleeing
Shortened Arm Swing	No	No	No	No
Adjusting Pants	Yes	Maybe	No	No
Repositioning of Firearm	Yes	Maybe	No	No
Blading	No	No	No	Maybe, if going for weapon

Table Key

Color	Description
Green	Behavior likely to occur
Yellow	Behavior may occur
Red	Behavior not likely to occur

ALTERNATIVE METHODS OF GUN CARRYING

Many of the behavioral indicators associated with gun carrying are related to the weight and mass of the weapon and the way the weapon is carried. Persons that carry illegal guns have developed a number of novel ways to carry them. A person carrying a firearm in any of these ways is likely to exhibit the behaviors discussed above that are associated with situational awareness and their reaction to perceived threats. However, these methods of carrying will influence the behavioral cues related to the mass of the weapon. This section describes some of these novel ways of carrying and provides some basic information on the types of behaviors likely to occur based upon each method of carrying. We do not go into the same level of detail as in the previous discussions. It does not include all ways a gun may be carried, but rather this information is included to provide examples and enhance awareness. It is included because of the possible relevance to those practitioners who interdict firearms or train others to do so.

Coat Hanger

Evidence from law enforcement indicates some criminals twist a coat hanger and use it as a means of carrying a firearm (J. Zelezniak, personal communication, March 15, 2011). The coat hanger is twisted in an "S" shape, allowing it to be hung on the belt, and the other portion of the hanger is used to hold the gun. One part of the hanger is hung off the belt, the gun is slid onto the other end as a means of holding it in place, and the belt itself holds the gun at the waist. This leaves the offender with easy access to the weapon and limits the likelihood that the gun will be lost while the offender is walking or running.

We hypothesize that wearing a gun in this way is also likely to limit the occurrence of some behaviors because the offender will be less concerned about losing control of the weapon while walking. However, the security feel will still be a factor, especially when the subject is running. The person will hold the gun in place with one hand, or draw to use it or discard it if he is running from the police and believes he may be caught. Repositioning may occur when transitioning from a seated position to a standing position. Because the gun is very accessible in this carrying position, the subject may show behavior cues such as arms in a semi-defensive position and blading.

Concealment Under Clothing/Belt

Offenders were also found to carry a gun concealed inside the front of the pants directly above the groin (J. Zelezniak, personal communication, March 15, 2011). The individual typically wears oversized or baggy pants with a belt to hold the top of the pants at a specific height on the hips. The underwear is worn above the beltline a few inches. The handgun is placed inside the underwear against the body just above the groin. Since the pants and belt are worn low on the hips, the belt is in line with a portion of the gun inside the underwear and helps to hold it in place. The belt is worn snug against the body to support both gun and pants. Having the underwear exposed allows the individual quick access to the gun by grabbing the top of underwear, pulling it way from the waist and sliding the hand inside directly to the gun. During cold weather, multiple layers could be worn, such as a pair of underwear, long johns, sweatpants, and a pair of pants. The extra layers are worn between the outer pair of pants and the underwear and are at the same height as the underwear, again with the belt securing the weapon between the underwear and sweatpants. Carrying the weapon in this manner requires constant adjusting of the gun, but allows quick access for use or to throw it away. This method of gun carrying is one of the least secure methods and is likely to cause a carrier to exhibit the security feel, repositioning, adjusting pants, and disrupted stride.

Concealment of Handgun in Center of Chest

Sources indicate that some offenders may carry a firearm by strapping it to the chest (J. Zelezniak, personal communication, March 15, 2011). The purpose of securing a handgun in the center of the chest is to avoid detection during law enforcement pat-downs. During an encounter between citizens and the police, it is common practice for a police officer to perform a pat-down search for weapons. This is legally allowed and done to ensure officer safety. These types of searches are sometimes hastily performed, mainly focusing on areas such as the waistline, pockets, and groin where guns are normally carried, while ignoring other areas. To avoid having the gun found during a search, some offenders may secure the gun in the center of the chest and hold it in place by either a belt or an elastic bandage. The gun is held tightly to the body and hidden under an article of clothing while allowing easy access by either hand. Martinez (R. Martinez, personal communication, February 24, 2012) indicates this has also been done by someone using a cut down back belt. Persons carrying a weapon in this way may exhibit the security feel and gun repositioning, depending on their level of physical activity. Repositioning may be performed by adjusting the gun from outside the clothing or by reaching underneath the clothing to make the adjustment. To verify access to the firearm, the carrier may also subtly reach his hand under his shirt to make sure he can access the gun. This may be done by sliding just the thumb underneath the clothes covering the weapon.

Concealment of Handgun in Groin Area with Lanyard

Anecdotal evidence indicates some offenders may hang a firearm by a lanyard from a belt (J. Zelezniak, personal communication, March 15, 2011). One end of the lanyard is secured to the handgun and the other end secured to the individual's belt. Hensley (D.K. Hensley, personal communication, October 2, 2012) reports this has also occurred with fishing line, so this carrying method could also likely occur with other "rope like" implements. The gun hangs by the lanyard just below the groin area along the inside of the thigh. Wearing baggy pants low on the waist helps create room to conceal the gun. Hanging the gun by a lanyard is for concealment purposes and requires the gun to be detached from the lanyard in order to use it. Offenders carrying a weapon in this way may exhibit the security feel, gun repositioning (if gun moves from inside the thigh to the front of the thigh), adjusting pants, and a shortened or disrupted stride. The gun may also pendulum back and forth while the subject is in motion, which may be visible by the movement of the outer clothing.

Armband Conceal and Carry Holster

Another novel form of carrying a firearm is one that attaches to the person's upper arm. This method can be accomplished with a makeshift holster (utilizing an Ace-type elastic bandage) or one purchased from a conventional company. The design of this type of holster involves a wide black elastic fabric that wraps around the bicep and is secured by Velcro hook and loop fastener tape. Attached to the elastic wrap is a pocket with a security strap that holds the gun in place. When fastened to the arm, the handgun is positioned on the inside of the upper arm with the muzzle pointing behind the person. The gun is now in a position that is easily accessible by applying a cross-draw technique using the opposite hand. The rig is generally concealed under a short-sleeved shirt for easy access. The quickest and safest method of drawing the gun starts with the person folding the arms across the chest with the shooting hand under the bicep on the grip of the gun. From this position the gun can be quickly removed from the pocket and pointed at the intended target. A posture with arms folded across the chest should be considered as threatening as a bladed stance with arms in a semi-defensive position. When carrying a small handgun by this method, the person may exhibit shortened arm swing, repositioning of the gun, clothing adjustment (picking at the shirt sleeve), and blading to conceal. Another observable indicator is that the distance between the elbow and the body may be different when comparing the carrying arm to the non-carrying arm.

Shoulder Holsters

Shoulder holsters are another method of carrying a firearm. Also, certain types of clothing are specially designed with pockets to facilitate carrying a firearm in a similar location as to a shoulder holster (R. Martinez, personal communication, February 24, 2012). Therefore, some people may simply place the firearm in the breast pocket of the coat. Offenders carrying in this way are likely to exhibit the security feel, shortened arm swing, and blading. Depending on the size of the weapon and the way it is carried, it may also cause someone's clothing to bulge. This bulge may be more difficult to spot on larger individuals wearing baggy clothing.

Manufactured Clothing

A variety of clothing manufacturers are designing and selling clothing with large hidden pockets or pockets specifically designed to carry a firearm. Pockets used to carry a firearm are often located in a reachable area, such as the chest or pants. This can also include homemade pockets on clothing to conceal and/or provide easy access to a firearm. The behaviors associated with carrying in these kinds of pockets will be dependent on the carrying location and the exact nature of the clothing.

CONCLUSION

This report outlines a number of behavioral and situational indicators of gun carrying. We attempt to describe relevant indicators and offer taxonomies based on when these behaviors are likely to occur within the context of an initial encounter with law enforcement. These indicators may be used, in combination with an understanding of the operational environment, to identify persons carrying guns. These behavioral indicators may also facilitate a better understanding of other situations where law enforcement is seeking to identify persons trying to deceive them or persons trying to evade detection.

These indicators were collected from a review of available literature, attendance at police training sessions, discussions and input from subject matter experts, and the experience of the authors. These indicators have not been subject to any systematic validation. A validation is necessary to determine the extent to which persons carrying illegal firearms exhibit these kinds of behaviors and the extent to which it is possible for trained law enforcement to identify them. We hope to develop more efficient and effective means of assisting the police to identify and safely interdict persons carrying illegal firearms. It is hoped that this enhanced capacity will serve as a means of reducing crime while keeping officers safe.

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